CLAIMS

What is claimed is:

1. A method of detecting expression of mammalian CC-chemokine receptor 2 or portion thereof by a cell, comprising:

a) contacting a composition comprising a cell to be tested with an antibody or antigen-binding fragment thereof which binds to the amino-terminal domain of said receptor under conditions appropriate for binding of said antibody or fragment thereof thereto, wherein said antibody or antigen-binding fragment thereof inhibits binding of a chemokine to said receptor and inhibits one or more functions associated with binding of said chemokine to said receptor; and

b) detecting binding of said antibody or antigen-binding fragment thereof, wherein the binding of said antibody or antigen-binding fragment thereof indicates the presence of said receptor or portion of said receptor on said cell.

2. The method according to Claim 1, wherein said composition is a sample comprising human cells.

3. The method according to Claim 1, wherein said composition is a sample comprising a membrane fraction of said cell to be tested.

4. The method according to Claim 1, wherein said mammalian CC-chemokine receptor 2 or portion thereof is a human CC-chemokine receptor 2 or portion thereof.

5. The method according to Claim 1, wherein said antibody or antigen-binding fragment thereof is labeled with a label selected from the group consisting of a

radioisotope, spin label, antigen label, enzyme label, fluorescent group and chemiluminescent group.

6. The method according to Claim 1, wherein said antibody or antigen-binding fragment thereof is selected from the group consisting of:

i) monoclonal antibody 1D9;

ii) an antibody having the epitopic specificity of 1D9;

iii) an antibody which can compete with 1D9 for binding to mammalian CC-chemokine receptor 2;

iv) monoclonal antibody 8G2;

v) an antibody having the epitopic specificity of 8G2;

vi) an antibody which can compete with 8G2 for binding to mammalian CC-chemokine receptor 2;

vii) antigen-binding fragments of any one of (i) through (vi) which bind mammalian CC-chemokine receptor 2; and

viii) combinations of the foregoing.

7. The method according to Claim 1, wherein said antibody or antigen-binding fragment thereof is a recombinant antibody or antigen-binding fragment thereof.

8. The method according to Claim 1, wherein said antibody or antigen-binding fragment thereof is a chimeric antibody or antigen-binding fragment thereof.

9. The method according to Claim 1, wherein said antibody or antigen-binding fragment thereof is a human antibody or antigen-binding fragment thereof.

10. The method according to Claim 1, wherein said antibody or antigen-binding fragment thereof is a humanized antibody or antigen-binding fragment thereof.

11. The method according to Claim 10, wherein said humanized antibody or antigen-binding fragment thereof comprises at least one antigen-binding region of monoclonal antibody 1D9.

12. The method according to Claim 10, wherein said humanized antibody or antigen-binding fragment thereof comprises at least one complementarity-determining region of monoclonal antibody 1D9.

13. The method according to Claim 12, wherein said humanized antibody or antigen-binding fragment thereof comprises six complementarity-determining regions of monoclonal antibody 1D9.

14. The method according to Claim 10, wherein said humanized antibody or antigen-binding fragment thereof comprises at least one antigen-binding region of monoclonal antibody 8G2.

15. The method according to Claim 10, wherein said humanized antibody or antigen-binding fragment thereof comprises at least one complementarity-determining region of monoclonal antibody 8G2.

16. The method according to Claim 15, wherein said humanized antibody or antigen-binding fragment thereof comprises six complementarity-determining regions of monoclonal antibody 8G2.

17. The method according to Claim 1, wherein said antigen-binding fragment is selected from the group consisting of an Fv fragment, an Fab fragment, an Fab' fragment and an $F(ab')_2$ fragment.

18. A method of detecting a mammalian CC-chemokine receptor 2 or portion of said receptor, comprising:

a) contacting a sample to be tested with an antibody or antigen-binding fragment thereof which binds to the amino-terminal domain of said receptor under conditions appropriate for binding of said antibody or fragment thereof thereto, wherein said antibody or antigen-binding fragment thereof inhibits binding of a chemokine to said receptor and inhibits one or more functions associated with binding of said chemokine to said receptor; and

b) detecting or measuring binding of said antibody or antigen-binding fragment thereof,

wherein the binding of said antibody or antigen-binding fragment thereof to material in said sample is indicative of the presence of a mammalian CC-chemokine receptor 2 or portion of said receptor in said sample.

19. A method according to Claim 18, wherein said sample is a cellular fraction which, in normal individuals, comprises a mammalian CC-chemokine receptor 2 or portion of said receptor.

20. The method according to Claim 19, wherein said cellular fraction is a membrane fraction.

21. The method according to Claim 18, wherein said mammalian CC-chemokine receptor 2 or portion thereof is a human CC-chemokine receptor 2 or portion thereof.

22. The method according to Claim 18, wherein said antibody or antigen-binding fragment thereof is labeled with a label selected from the group consisting of a

radioisotope, spin label, antigen label, enzyme label, fluorescent group and chemiluminescent group.

23. The method according to Claim 18, wherein said antibody or antigen-binding fragment thereof is selected from the group consisting of:

i) monoclonal antibody 1D9;

ii) an antibody having the epitopic specificity of 1D9;

iii) an antibody which can compete with 1D9 for binding to mammalian CC-chemokine receptor 2;

iv) monoclonal antibody 8G2;

v) an antibody having the epitopic specificity of 8G2;

vi) an antibody which can compete with 8G2 for binding to mammalian CC-chemokine receptor 2;

vii) antigen-binding fragments of any one of (i) through (vi) which bind to mammalian CC-chemokine receptor 2; and

viii) combinations of the foregoing.

24. The method according to Claim 18, wherein said antibody or antigen-binding fragment thereof is a recombinant antibody or antigen-binding fragment thereof.

25. The method according to Claim 18, wherein said antibody or antigen-binding fragment thereof is a chimeric antibody or antigen-binding fragment thereof.

26. The method according to Claim 18, wherein said antibody or antigen-binding fragment thereof is a human antibody or antigen-binding fragment thereof.

27. The method according to Claim 18, wherein said antibody or antigen-binding fragment thereof is a humanized antibody or antigen-binding fragment thereof.

28. The method according to Claim 27, wherein said humanized antibody or antigen-binding fragment thereof comprises at least one antigen-binding region of monoclonal antibody 1D9.

29. The method according to Claim 27, wherein said humanized antibody or antigen-binding fragment thereof comprises at least one complementarity-determining region of monoclonal antibody 1D9.

30. The method according to Claim 29, wherein said humanized antibody or antigen-binding fragment thereof comprises six complementarity-determining regions of monoclonal antibody 1D9.

31. The method according to Claim 27, wherein said humanized antibody or antigen-binding fragment thereof comprises at least one antigen-binding region of monoclonal antibody 8G2.

32. The method according to Claim 27, wherein said humanized antibody or antigen-binding fragment thereof comprises at least one complementarity-determining region of monoclonal antibody 8G2.

33. The method according to Claim 32, wherein said humanized antibody or antigen-binding fragment thereof comprises six complementarity-determining regions of monoclonal antibody 8G2.

34. The method according to Claim 18, wherein said antigen-binding fragment is selected from the group consisting of an Fv fragment, an Fab fragment, an Fab' fragment and an $F(ab')_2$ fragment.

35. A test kit for use in detecting the presence of a mammalian CC-chemokine receptor 2 in a biological sample comprising at least one antibody or antigen-binding fragment thereof which binds to the amino-terminal domain of mammalian CC-chemokine receptor 2, wherein said antibody or antigen-binding fragment thereof inhibits binding of a chemokine to said receptor and inhibits one or more functions associated with binding of said chemokine to said receptor, and one or more ancillary reagents suitable for detecting the presence of a complex between said antibody or antigen-binding fragment thereof and said mammalian CC-chemokine receptor 2.

36. The test kit according to Claim 35, wherein said mammalian CC-chemokine receptor 2 or portion thereof is a human CC-chemokine receptor 2 or portion thereof.

37. The test kit according to Claim 35, wherein said antibody or antigen-binding fragment thereof is selected from the group consisting of:

i) monoclonal antibody 1D9;

ii) an antibody having the epitopic specificity of 1D9;

iii) an antibody which can compete with 1D9 for binding to mammalian CC-chemokine receptor 2;

iv) monoclonal antibody 8G2;

v) an antibody having the epitopic specificity of 8G2;

vi) an antibody which can compete with 8G2 for binding to mammalian CC-chemokine receptor 2;

vii) antigen-binding fragments of any one of (i) through (vi) which bind mammalian CC-chemokine receptor 2; and

viii) combinations of the foregoing.

38. The test kit according to Claim 35, wherein said antibody or antigen-binding fragment thereof is a recombinant antibody or antigen-binding fragment thereof.

39. The test kit according to Claim 35, wherein said antibody or antigen-binding fragment thereof is a chimeric antibody or antigen-binding fragment thereof.

40. The test kit according to Claim 35, wherein said antibody or antigen-binding fragment thereof is a human antibody or antigen-binding fragment thereof.

41. The test kit according to Claim 35, wherein said antibody or antigen-binding fragment thereof is a humanized antibody or antigen-binding fragment thereof.

42. The test kit according to Claim 41, wherein said humanized antibody or antigen-binding fragment thereof comprises at least one antigen-binding region of monoclonal antibody 1D9.

43. The test kit according to Claim 41, wherein said humanized antibody or antigen-binding fragment thereof comprises at least one complementarity-determining region of monoclonal antibody 1D9.

44. The test kit according to Claim 43, wherein said humanized antibody or antigen-binding fragment thereof comprises six complementarity-determining regions of monoclonal antibody 1D9.

45. The test kit according to Claim 41, wherein said humanized antibody or antigen-binding fragment thereof comprises at least one antigen-binding region of monoclonal antibody 8G2.

46. The test kit according to Claim 41, wherein said humanized antibody or antigen-binding fragment thereof comprises at least one complementarity-determining region of monoclonal antibody 8G2.

47. The test kit according to Claim 46, wherein said humanized antibody or antigen-binding fragment thereof comprises six complementarity-determining regions of monoclonal antibody 8G2.

48. The test kit according to Claim 35, wherein said antigen-binding fragment is selected from the group consisting of an Fv fragment, an Fab fragment, an Fab' fragment and an $F(ab')_2$ fragment.